

SITE LOCATION MAP

The map shows the project site located at the intersection of Ward Rd. and Independence Rd. The site is marked with a hatched circle. Surrounding areas include Griffin Corner, Creek, Little John, and various roads such as Woodstock, Cuba, Little John, and Millington. A hatched circle marks the project site.



SHEET NAME	SHEET NO.
<u>CIVIL</u>	
GENERAL NOTES & SPECIAL NOTES	C1.0 - C1.1
ESTIMATED QUANTITIES & GRADING PLAN	C2.0
EROSION & SEDIMENT CONTROL PLAN	C3.0 - C3.1
CROSS SECTION	C4.0 - C4.1

PROJECT APPROVAL

PUBLIC WORKS DIRECTOR

SHELBY COUNTY

DATE _____

GENERAL NOTES

GRADING

- (1) ANY AREA THAT IS DISTURBED OUTSIDE LIMITS OF CONSTRUCTION DURING THE LIFE OF THIS PROJECT SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE.
- (2) CERTIFICATION FOR ALL BORROW PITS MUST BE OBTAINED IN ACCORDANCE WITH SUBSECTION 107.06 OF THE STANDARD SPECIFICATIONS.
- (3) THE CONTRACTOR SHALL NOT DISPOSE OF ANY MATERIAL EITHER ON OR OFF STATE-OWNED R.O.W. IN A REGULATORY FLOOD WAY AS DEFINED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY WITHOUT APPROVAL BY SAME. ALL MATERIAL SHALL BE DISPOSED OF IN UPLAND (NON-WETLAND) AREAS AND ABOVE ORDINARY HIGH WATER OF ANY ADJACENT WATERCOURSE. THIS DOES NOT ELIMINATE THE NEED TO OBTAIN ANY OTHER LICENSES OR PERMITS THAT MAY BE REQUIRED BY ANY OTHER FEDERAL, STATE OR LOCAL AGENCY.

SEEDING AND SODDING

- (4) ITEM NO. 801-01, SEEDING (WITH MULCH), SHALL BE USED WHERE EROSION CONTROL BLANKET OR SOD ARE NOT APPLIED.

RIPRAP

- (1) MACHINED RIPRAP SHALL BE IN ACCORDANCE WITH SECTION 709 OF THE STANDARD SPECIFICATIONS EXCEPT AS MODIFIED BY THIS NOTE. MACHINED RIPRAP SHALL BE CLEAN SHOT ROCK CONTAINING NO SAND, DUST, OR ORGANIC MATERIALS AND SHALL VARY IN SIZE FROM 2" TO 1'-3" (CLASS A-1), 3" TO 2'-3" (CLASS B). THE STONE SIZES SHALL BE DISTRIBUTED UNIFORMLY THROUGHOUT THE SIZE RANGE WITH NO MORE THAN 20% OF THE MATERIAL (BY WEIGHT) LESS THAN 4" (CLASS A-1), AND 6" (CLASS B). THE THICKNESS OF THE STONE LAYER SHALL BE 3'-0" (+/-3") (CLASS A-1), AND 2'-6" (+/-4") (CLASS B). THE SIZE GRADATION SHALL BE UNIFORMLY DISTRIBUTED THROUGHOUT THE LAYER THICKNESS AND FROM TOP TO BOTTOM OF THE SLOPE.

UPON COMPLETION OF THE PROJECT, A VISUAL INSPECTION SHALL REVEAL THAT APPROXIMATELY 50% OF THE SURFACE AREA CONSISTS OF STONES NO SMALLER THAN HALF OF THE MAXIMUM SIZE SPECIFIED. PAYMENT WILL BE MADE UNDER ITEM 709-05.06 MACHINED RIPRAP (CLASS A-1), TON, AND QUANTITIES WILL BE BASED ON THE AVERAGE THICKNESS OF 3'- 0". PAYMENT WILL BE MADE UNDER ITEM 709-05.08 MACHINED RIPRAP (CLASS B), TON, AND QUANTITIES WILL BE BASED ON THE AVERAGE THICKNESS OF 2'- 6".

EROSION PREVENTION AND SEDIMENT CONTROL

DISTURBED AREA

- (2) AREAS TO BE UNDISTURBED SHALL BE CLEARLY MARKED IN THE FIELD BEFORE CONSTRUCTION ACTIVITIES BEGIN.
- (3) PRE-CONSTRUCTION VEGETATIVE GROUND COVER SHALL NOT BE DESTROYED, REMOVED OR DISTURBED (I.E. CLEARING AND GRUBBING INITIATED) MORE THAN 15 CALENDAR DAYS PRIOR TO GRADING OR EARTH MOVING ACTIVITIES UNLESS THE AREA IS MULCHED, SEEDED WITH MULCH, OR OTHER TEMPORARY COVER IS INSTALLED.
- (4) CLEARING, GRUBBING, AND OTHER DISTURBANCE TO RIPARIAN VEGETATION SHALL BE LIMITED TO THE MINIMUM NECESSARY FOR SLOPE CONSTRUCTION AND EQUIPMENT OPERATIONS. EXISTING VEGETATION SHOULD BE PRESERVED TO THE MAXIMUM EXTENT POSSIBLE. UNNECESSARY VEGETATION REMOVAL IS PROHIBITED.
- (5) ALL DISTURBED AREAS SHALL BE PROPERLY STABILIZED AS SOON AS PRACTICABLE. PRIORITY SHALL BE GIVEN TO FINISHING OPERATIONS AND PERMANENT EPSC MEASURES OVER TEMPORARY EPSC MEASURES ON ALL PROJECTS.
- (6) CONSTRUCTION SHALL BE SEQUENCED AND STAGED TO MINIMIZE THE EXPOSURE TIME OF GRADED OR DENUDED SOIL AREAS, PRESERVE TOPSOIL, AND MINIMIZE SOIL COMPACTION.
- (7) NO MORE THAN 50 ACRES OF ACTIVE SOIL DISTURBANCE IS ALLOWED AT ANY TIME DURING THE CONSTRUCTION OF THE PROJECT. OFF-SITE BORROW OR WASTE AREAS ARE TO BE INCLUDED IN THE TOTAL DISTURBED AREA IF THE BORROW OR WASTE AREA IS EXCLUSIVE TO THE PROJECT PER TDOT'S WASTE AND BORROW MANUAL.

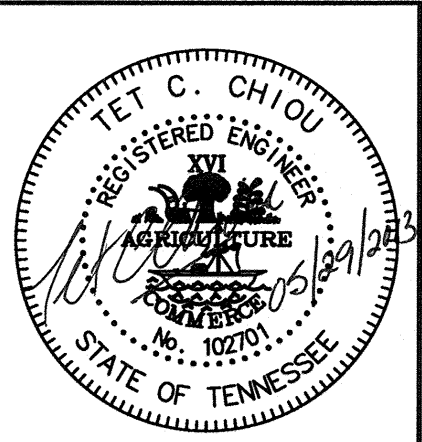
SEDIMENT CONTROL

- (8) EPSC MEASURES SHALL BE INSTALLED AND FUNCTIONAL PRIOR TO ANY EARTH MOVING OPERATIONS, AND SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
- (9) THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN A PROACTIVE METHOD TO PREVENT THE OFF-SITE MIGRATION OR DEPOSIT OF SEDIMENT ON ROADWAYS USED BY THE GENERAL PUBLIC. IF SEDIMENT ESCAPES THE CONSTRUCTION SITE, OFF-SITE ACCUMULATIONS OF SEDIMENT THAT HAVE NOT REACHED A STREAM MUST BE REMOVED AT A FREQUENCY SUFFICIENT TO MINIMIZE OFF-SITE IMPACTS (E.G., FUGITIVE SEDIMENT THAT HAS ESCAPED THE CONSTRUCTION SITE AND HAS COLLECTED IN A STREET MUST BE REMOVED SO THAT IT IS NOT SUBSEQUENTLY WASHED INTO STORM SEWERS AND STREAMS BY THE NEXT RAIN AND/OR SO THAT IT DOES NOT POSE A SAFETY HAZARD TO USERS OF PUBLIC STREETS). ARRANGEMENTS CONCERNING REMOVAL OF SEDIMENT ON ADJOINING PROPERTY MUST BE SETTLED WITH THE ADJOINING PROPERTY OWNER BEFORE REMOVAL OF SEDIMENT.
- (10) WATER PUMPED FROM WORK AREAS AND EXCAVATION MUST BE HELD IN SETTLING BASINS OR TREATED BY FILTRATION OR CHEMICAL TREATMENT PRIOR TO ITS DISCHARGE INTO SURFACE WATERS. ALL PHYSICAL AND/OR CHEMICAL TREATMENT WILL BE APPLIED IN ACCORDANCE WITH MANUFACTURER'S GUIDELINES AND FULLY DESCRIBED IN THE EPSC PLANS. WATER MUST BE HELD IN SETTLING BASINS UNTIL AT LEAST AS CLEAR AS THE RECEIVING WATERS. SETTLING BASINS SHALL NOT BE LOCATED CLOSER THAN 20 FEET FROM THE TOP BANK OF A STREAM. SETTLING BASINS AND SEDIMENT TRAPS SHALL BE PROPERLY DESIGNED ACCORDING TO THE SIZE OF THE DRAINAGE AREAS OR VOLUME OF WATER TO BE TREATED. TREATED WATER MUST BE DISCHARGED THROUGH A PIPE OR WELL- VEGETATED OR LINED CHANNEL, SO THAT THE DISCHARGE DOES NOT CAUSE EROSION OR SEDIMENT TRANSPORT. DISCHARGES FROM BASINS AND IMPOUNDMENTS SHALL UTILIZE OUTLET STRUCTURES THAT ONLY WITHDRAW WATER FROM NEAR THE SURFACE OF THE BASIN OR IMPOUNDMENT. DISCHARGES MUST NOT CAUSE AN OBJECTIONABLE COLOR CONTRAST WITH THE RECEIVING STREAM.
- (11) CHECK DAMS SHALL BE USED WHERE RUNOFF IS CONCENTRATED. CLEAN ROCK, BRUSH, GABION, OR SANDBAG CHECK DAMS SHALL BE PROPERLY CONSTRUCTED TO REDUCE VELOCITY AND CONTROL EROSION.
- (12) FOR AN OUTFALL IN A DRAINAGE AREA OF 10 ACRES OR MORE, A TEMPORARY (OR PERMANENT) SEDIMENT BASIN OR EQUIVALENT CONTROL MEASURES THAT PROVIDES STORAGE FOR A CALCULATED VOLUME OF RUNOFF FROM A MINIMUM 2-YEAR/ 24-HOUR STORM EVENT, SHALL BE PROVIDED UNTIL FINAL STABILIZATION OF THE SITE. THE ENVIRONMENTAL AND DESIGN DIVISIONS MAY BE CONTACTED TO REVIEW AND CONCUR WITH ANY REVISION OF THE SWPPP BEFORE DISTURBANCE OF THE OUTFALL PROCEEDS.
- (13) IF PERMANENT OR TEMPORARY VEGETATION IS TO BE USED AS AN EPSC MEASURE, THEN THE TIMING OF PLANTING OF VEGETATION SHALL BE SHOWN IN THE SWPPP. DELAYING PLANTING OF COVER VEGETATION UNTIL WINTER MONTHS OR DRY MONTHS SHOULD BE AVOIDED, IF POSSIBLE.
- (14) OFFSITE VEHICLE TRACKING OF SEDIMENTS AND THE GENERATION OF DUST SHALL BE MINIMIZED. A STABILIZED CONSTRUCTION ACCESS (A POINT OF ENTRANCE/EXIT TO THE CONSTRUCTION PROJECT) SHALL BE PROVIDED, AS NEEDED, TO REDUCE THE TRACKING OF MUD AND DIRT ONTO PUBLIC ROADS BY CONSTRUCTION VEHICLES.
- (15) TEMPORARY EPSC MEASURES MAY BE REMOVED AT THE BEGINNING OF THE WORKDAY, BUT MUST BE REPLACED AT THE END OF THE WORKDAY.
- STREAM/WETLAND**
- (16) SOIL MATERIALS MUST BE PREVENTED FROM ENTERING WATERS OF THE STATE/U.S. EPSC MEASURES TO PROTECT WATER QUALITY MUST BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD. APPROPRIATE EPSC MEASURES MUST BE INSTALLED ALONG THE BASE OF ALL FILLS AND CUTS, ON THE DOWNHILL SIDE OF STOCKPILED SOIL, AND ALONG STREAM BANKS IN CLEARED AREAS TO PREVENT SEDIMENT MIGRATION INTO STREAMS IN ACCORDANCE WITH TDOT STANDARDS. THEY MUST BE INSTALLED ON THE CONTOUR, ENTRENCHED AND STAKED, AND EXTEND THE WIDTH OF THE AREA TO BE CLEARED.
- (17) INSTREAM EPSC DEVICES REQUIRE THE ENVIRONMENTAL DIVISION'S PERMITS SECTION REVIEW AND MUST BE PROCESSED BY THE PERMITS SECTION TO OBTAIN TDEC, USACE, AND TVA PERMITS.
- (18) THE OPERATION OF EQUIPMENT IN WATERS OF THE STATE/U.S., INCLUDING WETLANDS, SHALL BE ONLY AS SHOWN ON THE PROJECT PLANS AND/OR AS SO SPECIFIED IN THE ARAP/401, SECTION 404 PERMIT(S) AND/OR TVA26(A), IF APPLICABLE. ANY ADDITIONAL PERMITS REQUIRED BY THE

- CONTRACTOR'S METHOD OF OPERATION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN, AFTER RECEIVING THE APPROVAL OF TDOT ENVIRONMENTAL DIVISION.
- (19) STREAM BEDS SHALL NOT BE USED AS TRANSPORTATION ROUTES FOR CONSTRUCTION EQUIPMENT. TEMPORARY CROSSINGS MUST BE LIMITED TO ONE POINT PER STREAM AND EPSC MEASURES MUST BE USED WHERE THE STREAM BANKS ARE DISTURBED. WHERE THE STREAMBED IS NOT COMPOSED OF BEDROCK, A PAD OF CLEAN ROCK MUST BE USED AT THE CROSSING POINT AND CULVERTED TO PREVENT THE IMPOUNDMENT OF WATER FLOW. CLEAN ROCK IS ROCK OF VARIOUS TYPE AND SIZE, DEPENDING UPON APPLICATION, WHICH CONTAINS NO FINES, SOILS, OR OTHER WASTES OR CONTAMINANTS. OTHER MATERIALS USED FOR ALL TEMPORARY FILLS MUST BE COMPLETELY REMOVED IN THEIR ENTIRETY AFTER THE WORK IS COMPLETED AND THE AFFECTED AREAS RETURNED TO THEIR PREEXISTING ELEVATION. ALL TEMPORARY CROSSINGS MUST BE CONSTRUCTED IN ACCORDANCE WITH STD. DWG. EC-STR-25 UNLESS SPECIFICALLY ADDRESSED IN THE EPSC PLANS. ALTERNATIVELY, PLACING A TEMPORARY BRIDGE (BAILEY BRIDGE OR EQUIVALENT, TIMBERS, ETC.) FROM TOP OF BANK TO TOP OF BANK OR THE APPROPRIATE USE OF BARGES AT THE CROSSING TO AVOID DISTURBANCE OF THE STREAMBED IS AN ACCEPTABLE OPTION.
- SPECIES**
- (20) NO ACTIVITY MAY SUBSTANTIALLY DISRUPT THE MOVEMENT OF THOSE SPECIES OF AQUATIC LIFE INDIGENOUS TO THE WATER BODY, INCLUDING THOSE SPECIES THAT NORMALLY MIGRATE THROUGH THE AREA. THE SWPPP SHALL BE MODIFIED TO INCLUDE EPSC MEASURES TO PREVENT NEGATIVE IMPACTS TO LEGALLY PROTECTED STATE OR FEDERAL FAUNA OR FLORA OR AS INDICATED IN THE ECOLOGICAL STUDIES OR ON THE PERMIT(S).
- INSPECTION, MAINTENANCE, REPAIR**
- (21) EPSC CONTROLS WILL BE MAINTAINED IN ACCORDANCE WITH TDOT STANDARD DRAWINGS AND GOOD ENGINEERING PRACTICES.
- (22) INSPECTION, REPAIR, AND MAINTENANCE OF EPSC MEASURES/STRUCTURES IS TO BE PERFORMED ON A REGULAR BASIS. SEDIMENT SHALL BE REMOVED FROM SEDIMENT CONTROL STRUCTURES WHEN THE DESIGN CAPACITY HAS BEEN REDUCED BY FIFTY PERCENT (50%). DURING SEDIMENT REMOVAL, THE CONTRACTOR SHALL TAKE CARE TO ENSURE THAT STRUCTURAL COMPONENTS OF EPSC MEASURES ARE NOT DAMAGED AND THUS MADE INEFFECTIVE. IF DAMAGE DOES OCCUR, THE CONTRACTOR SHALL REPAIR THE STRUCTURES AT THE CONTRACTOR'S OWN EXPENSE.
- (23) OUTFALL POINTS SHALL BE INSPECTED TO ASCERTAIN WHETHER EPSC MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO SURROUNDING WATERS. WHERE DISCHARGE LOCATIONS ARE INACCESSIBLE, NEARBY DOWNSTREAM LOCATIONS SHALL BE INSPECTED. LOCATIONS WHERE VEHICLES ENTER AND EXIT THE SITE SHALL BE INSPECTED FOR EVIDENCE OF OFF-SITE ROADWAY SEDIMENT TRACKING.
- (24) UPON CONCLUSION OF THE INSPECTIONS, EPSC MEASURES FOUND TO BE INEFFECTIVE SHALL BE REPAIRED, REPLACED, OR MODIFIED BEFORE THE NEXT RAIN EVENT, IF POSSIBLE, BUT IN NO CASE MORE THAN 24 HOURS AFTER THE INSPECTION OR WHEN THE CONDITION IS IDENTIFIED. IF THE REPAIR, REPLACEMENT OR MODIFICATION IS NOT PRACTICAL WITHIN THE TIMEFRAME, WRITTEN DOCUMENTATION MUST BE PROVIDED IN THE FIELD BOOK AND AN ESTIMATED REPAIR, REPLACEMENT OR MODIFICATION SCHEDULE SHALL BE DOCUMENTED WITHIN 24 HOURS AFTER IDENTIFICATION.
- MATERIALS**
- (25) WASTE AND BORROW AREAS SHALL BE LOCATED IN NON-WETLAND AREAS AND ABOVE THE 100-YEAR, FEDERAL EMERGENCY MANAGEMENT AGENCY FLOODPLAIN. BORROW AND WASTE DISPOSAL AREAS SHALL NOT AFFECT ANY WATERS OF THE STATE/U.S. UNLESS THESE AREAS ARE SPECIFICALLY COVERED BY AN ARAP, 404, OR NPDES PERMIT, OBTAINED SOLELY BY THE CONTRACTOR.

NO. 10071
SHEETS: 10071-1 TO 10071-14
DATE: 11/14/13
LATEST REV.: 2/8/13
NO. 10071
SHEETS: 10071-1 TO 10071-14
DATE: 11/14/13
LATEST REV.: 2/8/13
NO. 10071
SHEETS: 10071-1 TO 10071-14
DATE: 11/14/13
LATEST REV.: 2/8/13

REVISION		
ITEM NO.	DESCRIPTION OF CHANGE	APPROVAL DATE



**BIG CREEK STABILIZATION AT
WARD ROAD BRIDGE**
OWNER: SHELBY COUNTY PUBLIC WORKS
ENGINEER: A2H INC.

DRAINAGE BASIN:/SEWER BASIN: BS-1

SHEET <u>1</u> OF <u>2</u> DIVISION OF PUBLIC WORKS			
GENERAL NOTES			
LOCATION: 6995 AND 7005 WARD ROAD			
SHELBY COUNTY, TENNESSEE			
SURVEY: <u>THY INC.</u>	DATE: <u>01/13</u>	BOOK: _____	
DRAWN BY: <u>A2H INC.</u>	DATE: <u>02/13</u>	SCALE: <u>NTS</u>	
DESIGN BY: <u>A2H INC.</u>	DATE: <u>02/13</u>	PROJECT: _____	
APPROVED: _____			
PUBLIC WORKS DIRECTOR, SHELBY COUNTY			DATE _____

DATE: 02/09/13
JOB NUMBER: 1334
PLOT DATE: 2/9/13
LATEST REVISION: 141

SWPPP, PERMITS, PLANS, RECORDS

- (1) THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR AND OBTAIN ANY NECESSARY ENVIRONMENTAL PERMITS OR APPROVALS, INCLUDING BUT NOT LIMITED TO TDEC ARAP/401, USACE SECTION 404, TVA SECTION 26A, AND TDEC NPDES PERMITS, FROM FEDERAL, STATE AND/OR LOCAL AGENCIES REGARDING THE OPERATION OF ANY PROJECT-DEDICATED ASPHALT AND/OR CONCRETE PLANTS.
- (2) THE FOLLOWING INFORMATION SHALL BE MAINTAINED ON OR NEAR THE SITE: DATES THAT MAJOR GRADING ACTIVITIES OCCUR, DATES WHERE CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE, DATES WHEN STABILIZATION MEASURES ARE INITIATED, EPSC INSPECTION RECORDS, QUALITY ASSURANCE SITE ASSESSMENT RECORDS, PRECIPITATION RECORDS, SWPPP, PROJECT ENVIRONMENTAL PERMITS, AND A COPY OF THE PROJECT EPSC INSPECTOR'S TDEC LEVEL 1 CERTIFICATION.
- (3) ALL WATER QUALITY AND STORM WATER PERMITS, INCLUDING A COPY OF THE NOC WITH NPDES PERMIT TRACKING NUMBER AND THE LOCATION OF THE SWPPP, SHALL BE POSTED NEAR THE MAIN ENTRANCE OF THE CONSTRUCTION SITE ACCESSIBLE TO THE PUBLIC. THE NAME, COMPANY NAME, EMAIL ADDRESS, TELEPHONE NUMBER AND ADDRESS OF THE PROJECT SITE OWNER, OPERATOR, OR A LOCAL CONTACT PERSON WITH A BREIF DESCRIPTION OF THE PROJECT SHALL ALSO BE POSTED. IF POSTING THIS INFORMATION NEAR A MAIN ENTRANCE IS INFEASIBLE, THE INFORMATION SHALL BE PLACED IN A PUBLICLY ACCESSIBLE LOCATION NEAR WHERE THE CONSTRUCTION IS ACTIVELY UNDERWAY AND MOVED AS NECESSARY. THIS LOCATION SHALL BE POSTED AT THE CONSTRUCTION SITE. ALL POSTINGS SHALL BE MAINTAINED IN LEGIBLE CONDITION.
- (4) THE SWPPP SHALL BE UPDATED BY CONSTRUCTION WHENEVER EPSC INSPECTIONS INDICATE, OR WHERE STATE OR FEDERAL OFFICIALS DETERMINE EPSC MEASURES ARE PROVING INEFFECTIVE IN ELIMINATING OR SIGNIFICANTLY MINIMIZING POLLUTANT SOURCES OR ARE OTHERWISE NOT ACHIEVING THE GENERAL OBJECTIVES OF CONTROLLING POLLUTANTS IN STORM WATER DISCHARGES ASSOCIATED WITH THE CONSTRUCTION ACTIVITY. THE ENVIRONMENTAL DIVISION SHALL BE CONTACTED WHEN MAJOR DESIGN REVISIONS ARE REQUESTED BY CONSTRUCTION. THE ENVIRONMENTAL DIVISION MAY BE CONTACTED FOR GUIDANCE ON SPECIFIC SWPPP NEEDS. A COPY OF ANY CORRESPONDENCE REGARDING THE EFFECTIVENESS OF THE SWPPP OR EPSC CONTROLS SHALL BE RETAINED IN THE SWPPP.

LITTER, DEBRIS, WASTE, PETROLEUM

- (5) THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN A PROACTIVE METHOD TO PREVENT LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION WASTES FROM ENTERING WATERS OF THE STATE/U.S. THESE MATERIALS WILL BE PICKED UP AND REMOVED FROM STORMWATER EXPOSURE PRIOR TO ANTICIPATED STORM EVENTS. AFTER USE, MATERIALS USED FOR EPSC WILL BE REMOVED FROM THE SITE.
- (6) THE CONTRACTOR SHALL TAKE APPROPRIATE STEPS TO ENSURE THAT PETROLEUM PRODUCTS OR OTHER CHEMICAL POLLUTANTS ARE PREVENTED FROM ENTERING WATERS OF THE STATE/U.S. ALL EQUIPMENT REFUELING, SERVICING, AND STAGING AREAS SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL LAWS, RULES, REGULATIONS, AND ORDINANCES, INCLUDING THOSE OF THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA). APPROPRIATE CONTAINMENT MEASURES FOR THESE AREAS SHALL BE USED. ALL SPILLS MUST BE REPORTED TO THE APPROPRIATE AGENCY, AND MEASURES SHALL BE TAKEN IMMEDIATELY TO PREVENT THE POLLUTION OF WATERS OF THE STATE/U.S., INCLUDING GROUNDWATER, SHOULD A SPILL OCCUR.

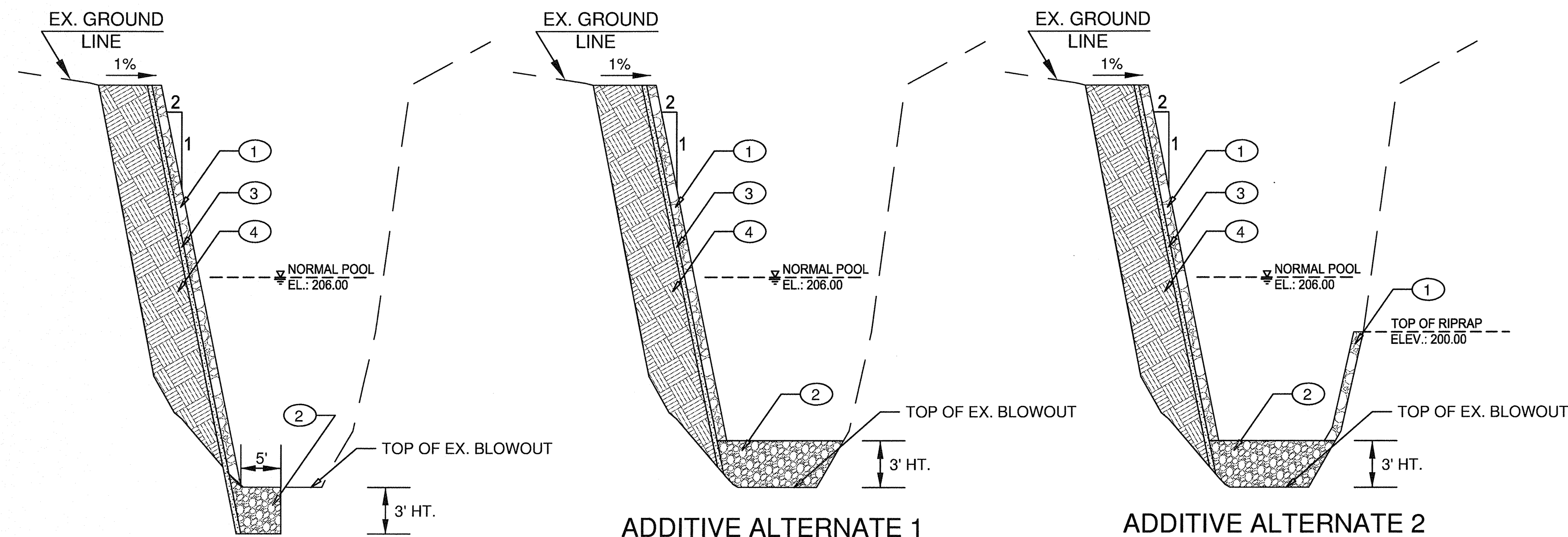
SPECIAL NOTES

GRADING

- (1) THE GRADING TABULATIONS AND RESULTING EARTHWORK ASSOCIATED BID QUANTITIES WERE PREPARED UTILIZING AVAILABLE GEOTECHNICAL INFORMATION AND/OR REPORTS PREPARED FOR THIS PROJECT. THIS INFORMATION IS PROVIDED FOR GENERAL INFORMATION AND ESTIMATION GUIDANCE ONLY.
- (2) THE CONTRACTOR SHALL UTILIZE ALL INFORMATION PROVIDED IN THE PLANS, CROSS-SECTIONS AND CONTRACT DOCUMENTS INCLUDING ANY SPECIAL PROVISIONS AS WELL AS UTILIZING HIS PAST EXPERIENCE WITH PROJECTS OF SIMILAR NATURE, SCOPE AND LOCATION IN PREPARATION OF HIS BID FOR EARTHWORK ITEMS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE AND PROVIDE EQUIPMENT AND MEANS NECESSARY TO CONDUCT THE EXCAVATION ACTIVITIES IN ACCORDANCE WITH PLANS AND SPECIFICATIONS.

- (3) EARTHWORK IS PAID FOR UNDER ITEM 203-01, ROAD AND DRAINAGE EXCAVATION (UNCLASSIFIED). NO ADDITIONAL PAYMENT WILL BE MADE FOR EARTHWORK QUANTITIES BASED SOLELY ON A CLAIM THAT THE QUANTITIES SHOWN IN THE GRADING TABULATION OR ELSEWHERE IN THE PLANS ARE INACCURATE WITH RESPECT TO THE TYPE OF MATERIALS ENCOUNTERED DURING CONSTRUCTION EXCEPT AS PROVIDED FOR BY SECTION 104.02 IN THE CURRENT EDITION OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION OR AS AMENDED IN SUPPLEMENTAL SPECIFICATIONS.
- (4) THE CONTRACTOR'S SITE SUPERINTENDENT ARE RESPONSIBLE FOR INSPECTIONS. MAINTENANCE AND REPAIR ACTIVITIES ARE THE RESPONSIBILITY OF THE CONTRACTOR.
- (5) ANY DISAGREEMENT BETWEEN THE PROJECT PLANS, THE PROJECT AS CONSTRUCTED, AND THE PERMIT(S) ISSUED FOR THE PROJECT, SHALL BE BROUGHT TO THE ATTENTION OF THE SHELBY COUNTY ENGINEER. THE DESIGN CONSULTANT SHALL BE CONTACTED IN THESE INSTANCES AND DECIDE WHICH HAS PRECEDENCE AND WHETHER PERMIT OR PLANS REVISIONS ARE NEEDED. IN GENERAL, PERMIT CONDITIONS WILL PREVAIL.
- (6) PROJECT INSPECTORS RESPONSIBLE FOR THE IMPLEMENTATION AND MAINTENANCE OF EPSC PLANS SHALL SUCCESSFULLY COMPLETE THE TDEC "LEVEL 1 - FUNDAMENTALS OF EROSION PREVENTION AND SEDIMENT CONTROL FOR CONSTRUCTION SITES" COURSE AND ANY REFRESHER COURSES AS REQUIRED TO MAINTAIN CERTIFICATION. A COPY OF CERTIFICATION RECORDS FOR THE COURSES SHALL BE KEPT ON SITE AND AVAILABLE UPON REQUEST.
- (7) SEDIMENT REMOVED FROM SEDIMENT CONTROL STRUCTURES SHALL BE PLACED AND BE TREATED IN A MANNER SO THAT THE SEDIMENT IS CONTAINED WITHIN THE PROJECT LIMITS AND DOES NOT MIGRATE INTO WATERS OF THE STATE/U.S. COST FOR THIS TREATMENT IS TO BE INCLUDED IN PRICE BID FOR ITEM NO. 203-03.15.
- (8) THE CONTRACTOR SHALL INSTALL A RAIN GAUGE AT THE CENTER OF THE PROJECT OR AS INDICATED BY THE SHELBY COUNTY EPSC INSPECTOR. THE CONTRACTOR SHALL ENSURE THAT EACH GAUGE IS MAINTAINED IN GOOD WORKING CONDITION. THE CONTRACTOR SHALL RECORD DAILY PRECIPITATION AND FORECASTED PERCENTAGE OF PRECIPITATION IN DETAILED RECORDS OF RAINFALL EVENTS INCLUDING DATES, AMOUNTS OF RAINFALL PER GAUGE, THE ESTIMATED DURATION (OR STARTING AND ENDING TIMES), AND FORECASTED PERCENTAGE OF PRECIPITATION FOR THE PROJECT. THIS INFORMATION SHALL BE PROVIDED TO THE ENGINEER ON A MONTHLY BASIS. THE COST FOR THE RAIN GAUGES IS TO BE INCLUDED IN THE UNIT BID PRICES FOR OTHER ITEMS. RAIN GAUGES SHALL BE AS SPECIFIED IN THE APPROVED TDOT RAINFALL MONITORING PLAN.
- (9) INSPECTION OF EPSC MEASURES SHALL BE DONE AT LEAST TWICE PER CALENDAR WEEK AT LEAST 72 HOURS APART. A CALENDAR WEEK IS DEFINED AS SUNDAY THROUGH SATURDAY.

<div>REVISION</div> <table><tr><th>ITEM NO.</th><th>DESCRIPTION OF CHANGE</th><th>APPROVAL DATE</th></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr></table>			ITEM NO.	DESCRIPTION OF CHANGE	APPROVAL DATE																															<div></div>	DRAINAGE BASIN:/SEWER BASIN: BS-1
ITEM NO.	DESCRIPTION OF CHANGE	APPROVAL DATE																																			
<div>SHEET <u>2</u> OF <u>2</u> DIVISION OF PUBLIC WORKS</div> <div>GENERAL NOTES & SPECIAL NOTES</div> <div>LOCATION: 6995 AND 7005 WARD ROAD</div> <div>SHELBY COUNTY, TENNESSEE</div> <div>SURVEY: <u>THY INC.</u> DATE: <u>01/13</u> BOOK: <u> </u></div> <div>DRAWN BY: <u>A2H INC.</u> DATE: <u>02/13</u> SCALE: <u>NTS</u></div> <div>DESIGN BY: <u>A2H INC.</u> DATE: <u>02/13</u> PROJECT: <u> </u></div> <div>APPROVED: <u> </u></div> <div>PUBLIC WORKS DIRECTOR, SHELBY COUNTY</div> <div>DATE <u> </u></div>																																					
BIG CREEK STABILIZATION AT WARD ROAD BRIDGE																																					
OWNER: SHELBY COUNTY PUBLIC WORKS																																					
ENGINEER: A2H INC.																																					



BASE BID
TYPICAL SECTION
N.T.S.
NORTH BANK FROM STATION 13+30 TO 15+90

ADDITIVE ALTERNATE 1
TYPICAL SECTION
N.T.S.
NORTH BANK FROM STATION 13+30 TO STATION 15+90
CHANNEL FROM STATION 14+02 TO STATION 15+56

ADDITIVE ALTERNATE 2
TYPICAL SECTION
N.T.S.
NORTH BANK FROM STATION 13+30 TO STATION 15+90
CHANNEL FROM STATION 14+02 TO STATION 15+56
SOUTH BANK FROM STATION 14+16 TO STATION 15+35

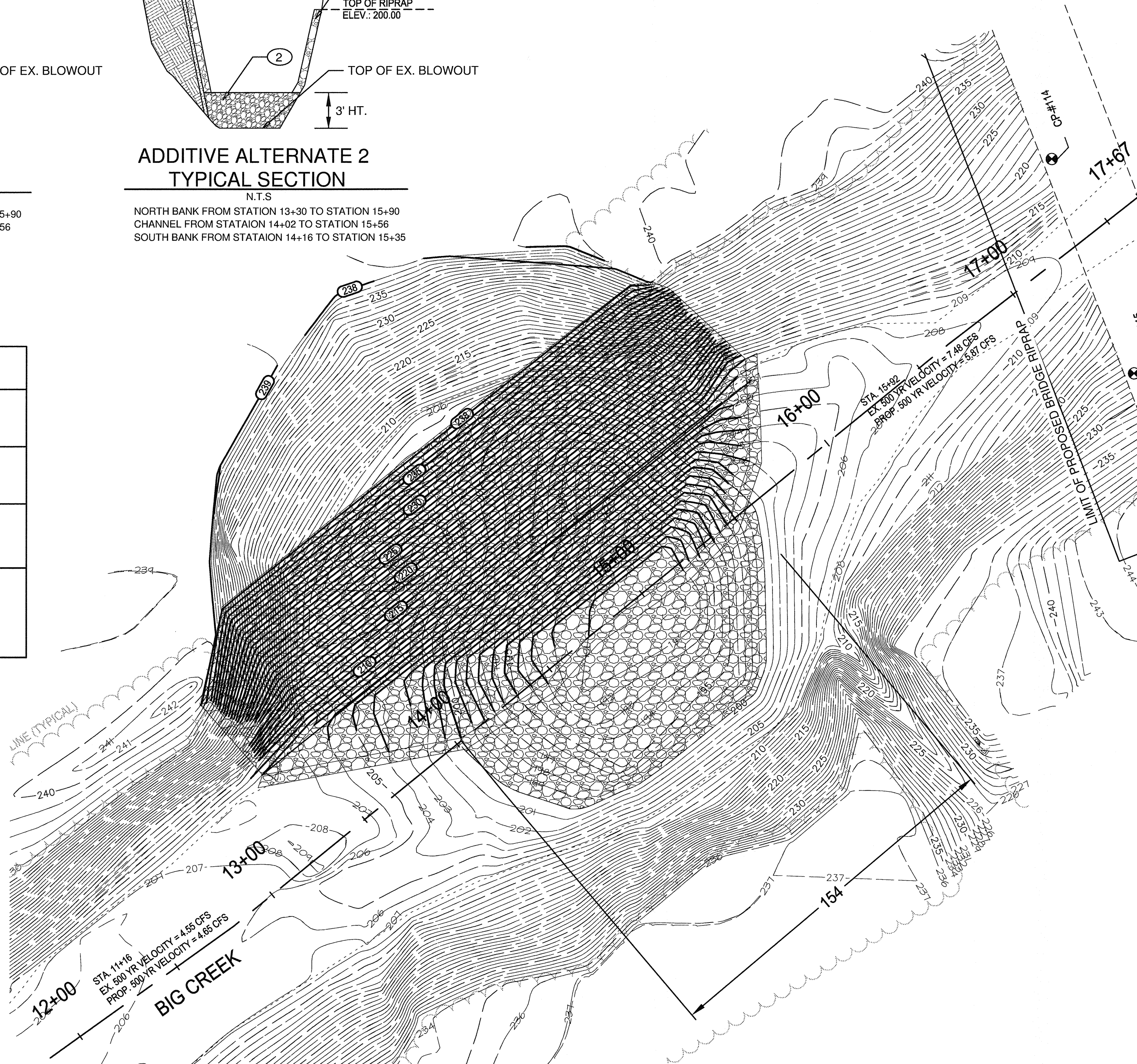
BANK STABILIZATION TYPICAL SECTION

PROPOSED SCHEDULE

①	RIPRAP CLASS 'B' 2.5' THICKNESS
ITEM 709-05.06	MACHINEED RIP RAP (CLASS B)
②	RIPRAP CLASS 'A-1' 3.0' THICKNESS
ITEM 709-05.08	MACHINEED RIP RAP (CLASS A-1)
③	MINERAL AGGREGATE @ 3.0" THICK
ITEM 303-10.01	MINERAL AGGREGATE (SIZE 57) PAY AS IN-PLACE COMPACTED PER C.Y.
④	BORROW EXCAVATION
ITEM 203-03	UNCLASSIFIED PAY AS IN-PLACE COMPACTED PER C.Y. ALL TESTING BY CONTRACTOR.

FOOT-NOTES	ESTIMATED QUANTITIES (BASE BID)			
	ITEM No.	DESCRIPTION	UNIT	QUANTITY
	201-01	CLEARING & GRUBBING	L.S.	1
3	203-03	BORROW EXCAVATION (UNCLASSIFIED)	C.Y.	20,710
2	209-08.03	TEMPORARY SILT FENCE (WITHOUT BACKING)	L.F.	1,000
3	303-10.01	MINERAL AGGREGATE (SIZE 57)	TON	323
3	709-05.06	MACHINED RIPRAP (CLASS 'A-1')	TON	426
3	709-05.08	MACHINED RIPRAP (CLASS 'B')	TON	4,049
	801-01	SEEDING (WITH MULCH)	UNIT	14
	ADDITIVE ALTERNATE 1 (ADDITIONAL QUANTITIES TO ADDITIVE ALTERNATE 1)			
3	709-05.06	MACHINED RIPRAP (CLASS 'A-1')	TON	654
	ADDITIVE ALTERNATE 2 (ADDITIONAL QUANTITIES TO BASE BID AND ADDITIVE ALTERNATIVE 1)			
3	709-05.08	MACHINED RIPRAP (CLASS 'B')	TON	354

FOOTNOTES:
1. TO BE USED AS DIRECTED BY ENGINEER.
2. EXACTING LOCATION AS DIRECTED BY ENGINEER.
3. CONTRACTOR PROVIDE CROSS SECTION BEFORE AND AFTER AT 50' INTERVAL FOR UNCLASSIFIED BACKFILL. RIPRAP TO BE PAID BY HAUL TICKET



NOTES

- PROPERTY LINES SHALL BE FIELD VERIFIED PRIOR TO CONSTRUCTION. GRADING, CLEARING, AND THE ERECTION OR REMOVAL OF FENCES ALONG PROPERTY LINES SHALL BE FULLY COORDINATED WITH ADJACENT PROPERTY OWNERS.
- THE CONTRACTOR SHALL VERIFY EXISTING DATA AND REPORT ANY SIGNIFICANT DISCREPANCIES TO THE ENGINEER.
- THE CONTRACTOR SHALL NOT ENTER UPON, WORK UPON, NOR CAUSE DAMAGE TO ANY ADJACENT PROPERTIES, WITHOUT PRIOR WRITTEN PERMISSION FROM SAID PROPERTY OWNERS.
- LOCATION OF EXISTING UNDERGROUND UTILITIES ARE APPROXIMATE AND ARE NOT NECESSARILY ALL OF SAME. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE APPROPRIATE UTILITY COMPANY TO DETERMINE THE EXACT LOCATION OF ALL UTILITIES AND/OR UNDERGROUND STRUCTURES PRIOR TO THE INITIATION OF ANY CONSTRUCTION. THE CONTRACTOR SHALL ALSO ASSUME FULL RESPONSIBILITY FOR DAMAGE TO ANY UTILITIES ENCOUNTERED WITHIN THE CONSTRUCTION PERIMETERS. FOR SITE LOCATION OF EXISTING UTILITIES INVOLVING M.L.G.W., SOUTH CENTRAL BELL, AND/OR TEXAS GAS COMPANY, PLEASE CALL 1-800-351-1111. FOR SEWER SERVICE LOCATIONS, CALL COUNTY ENGINEERING DEPARTMENT.
- CONTRACTOR SHALL MAINTAIN ACCESS TO ALL PROPERTIES
- TYPICAL SIDE SLOPES TO BE 1 FOOT VERTICAL FOR 2 FEET HORIZONTAL.
- ALL AREAS IN CUT AND OR FILL WHERE VEGETATION HAS BEEN REMOVED SHALL BE SEEDED, FERTILIZED, MULCHED AND/OR SODDED AS REQUIRED TO PREVENT SOIL EROSION.
- 24 HOURS PRIOR TO ANY CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE SHELBY COUNTY ENGINEER'S OFFICE.
- ALL CONSTRUCTION MATERIALS AND PROCEDURES SHALL MEET TENNESSEE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.
- ALL FILL AND/OR TRENCH BACKFILL AREAS SHALL BE COMPACTED IN 6" LIFTS TO 95% STANDARD PROCTOR WITHIN 3% ABOVE TO 2% BELOW OF OPTIMUM MOISTURE CONTENT AS DETERMINED BY ASTM D698-78 LATEST REVISION (STANDARD PROCTOR).
- THE CONTRACTOR SHALL INSTALL AND MAINTAIN A SILT FENCE AT THE TOP OF ALL DITCH BANKS FOR THE WIDTH OF THE CONSTRUCTION LIMITS AND CONTINUOUSLY ALONG THE "STREAMSIDE" CONSTRUCTION LIMIT.
- THE CONTRACTOR SHALL PROVIDE AND MAINTAIN EROSION CONTROL DURING CONSTRUCTION BY THE PLACEMENT OF BMP WHERE NECESSARY TO PREVENT DOWNSTREAM SILTATION OF ANY DITCHES, PIPES, DRAINAGE STRUCTURES, OR ADJACENT PROPERTIES. THE CONTRACTOR SHALL PROVIDE ANY ADDITIONAL EROSION CONTROL AS NEEDED OR AS DIRECTED BY THE ENGINEER.
- CONTRACTOR SHALL PROVIDE ALL NECESSARY EROSION METHODS AS PER THE SHELBY COUNTY, AND STATE OF TENNESSEE REGULATIONS.
- ENGINEERS CERTIFICATION: THIS PROJECT HAS BEEN DESIGNED IN ACCORDANCE WITH THE SHELBY COUNTY SUBDIVISION REGULATIONS AND TENNESSEE DEPARTMENT OF TRANSPORTATION SPECIFICATIONS.

HYDRAULIC DATA:

100-YR Q=25,500 CFS
100-YR WSEL = 241.50
100-YR VELOCITY= 5.55 FPS

FLOOD INFORMATION

FLOOD NOTE: THIS PROPERTY IS LOCATED IN A SPECIAL FLOOD HAZARD AREA PER F.E.M.A. FLOOD INSURANCE RATE MAP NO 47157C0155F, EFFECTIVE DATE SEPTEMBER 28, 2007.

REVISION		
ITEM NO.	DESCRIPTION OF CHANGE	APPROVAL DATE
BIG CREEK STABILIZATION AT WARD ROAD BRIDGE		
OWNER: SHELBY COUNTY PUBLIC WORKS		
ENGINEER: A2H INC.		

DRAINAGE BASIN;/SEWER BASIN: **BS-1**

SHEET **1** OF **1**
DIVISION OF PUBLIC WORKS
GRADING PLAN

LOCATION: 6995 AND 7005 WARD ROAD
SHELBY COUNTY, TENNESSEE

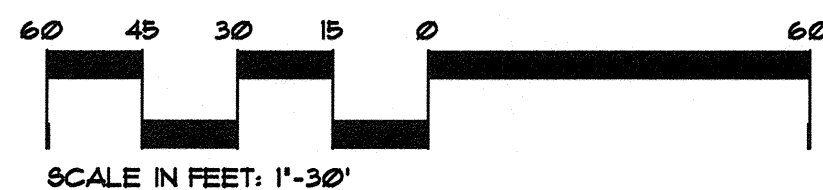
SURVEY: **THY INC.** DATE: **01/13** BOOK:

DRAWN BY: **A2H INC.** DATE: **02/13** SCALE: **1"= 30'**

DESIGN BY: **A2H INC.** DATE: **02/13** PROJECT:

APPROVED:

PUBLIC WORKS DIRECTOR, SHELBY COUNTY DATE:



TOTAL DISTURBED AREA 1.03 AC.

TEMP CONST. EXIT.
STD. DWG. EC-STR-25

CP-#113

CP-#114

17+67

17+00

16+00

15+00

14+00

13+00

12+00

BIG CREEK

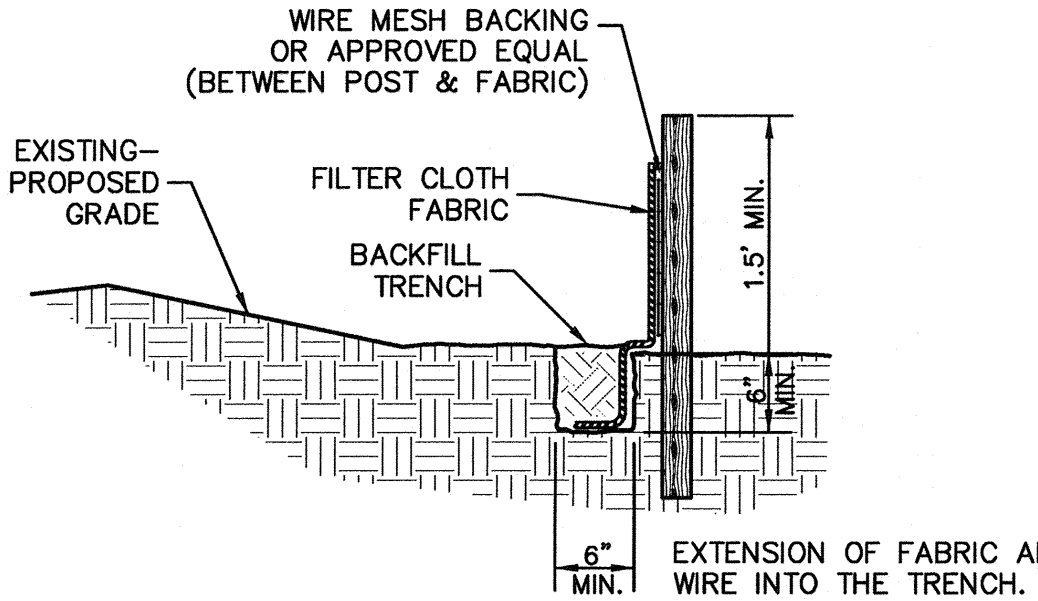
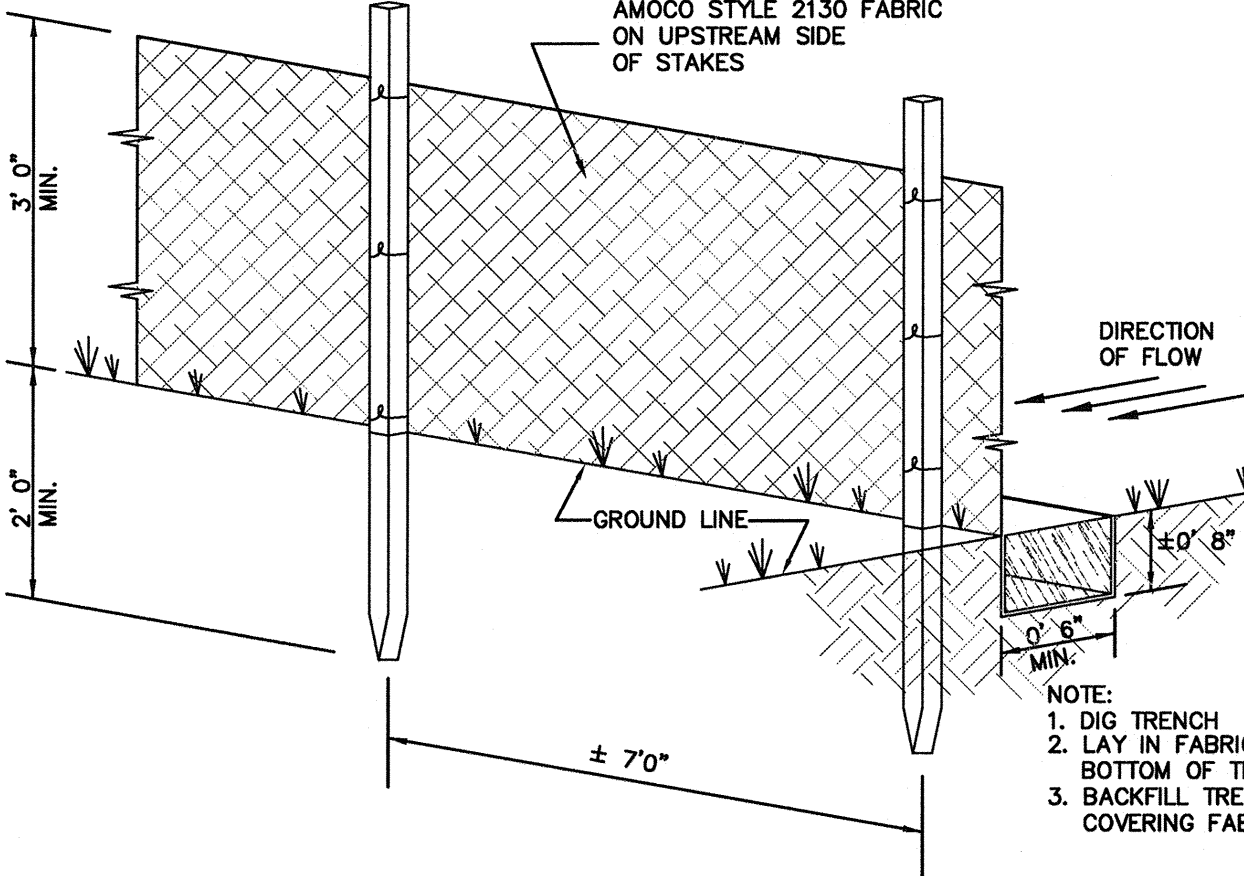
STA 11+16
EX 500 YR VELOCITY = 4.55 CFS
PROP 500 YR VELOCITY = 4.55 CFS

STA 15+92
EX 500 YR VELOCITY = 1.48 CFS
PROP 500 YR VELOCITY = 5.87 CFS

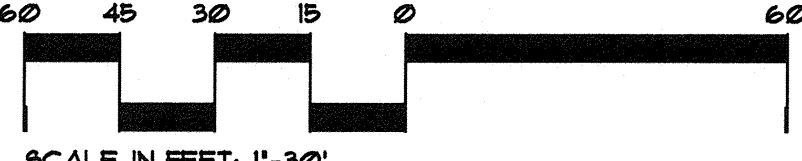
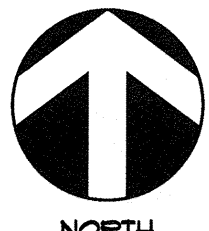
WARD ROAD

SPECIAL NOTES

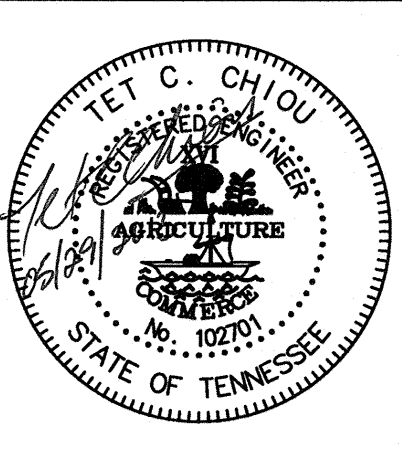
1. STREAM (EROSION PREVENTION AND SEDIMENT CONTROL NOTE):
ANY WORK WITHIN THE STREAM CHANNEL AREA (E.G., RIP-RAP PLACEMENT, ETC.) SHALL BE SEPARATED FROM FLOWING WATER OR EXPECTED FLOW PATH AND PERFORMED DURING LOW FLOW CONDITIONS. ALL ITEMS USED WITHIN THE STREAM CHANNEL AREA FOR DIVERSION OF FLOW (OR EXPECTED FLOW), UNLESS SPECIFIED IN THE PLANS, SHALL NOT BE PAID FOR DIRECTLY BUT SHALL BE INCLUDED IN THE COST OF THE OTHER ITEMS. THE NOTE EXCLUDES ANY ITEMS SPECIFIED IN THE PLANS FOR USE WITH EC-STR-31 AND EC-STR-32.
2. DEWATERING MAY BE NECESSARY.



1 SILT FENCE DETAIL
NOT TO SCALE
EXACT LOCATION AS DIRECTED BY ENGINEER



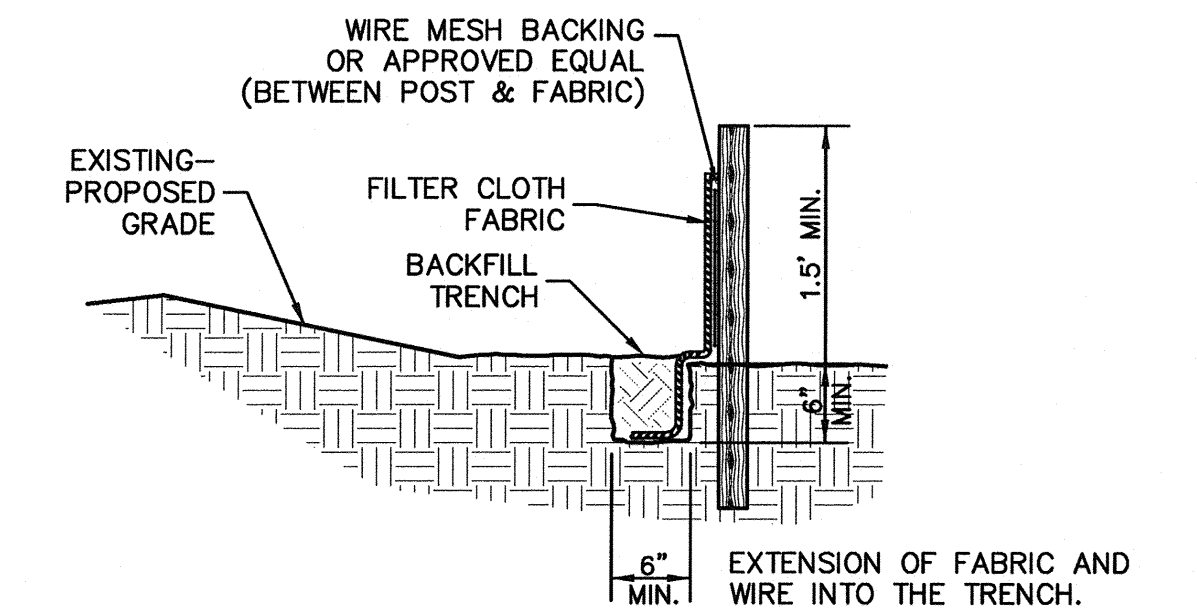
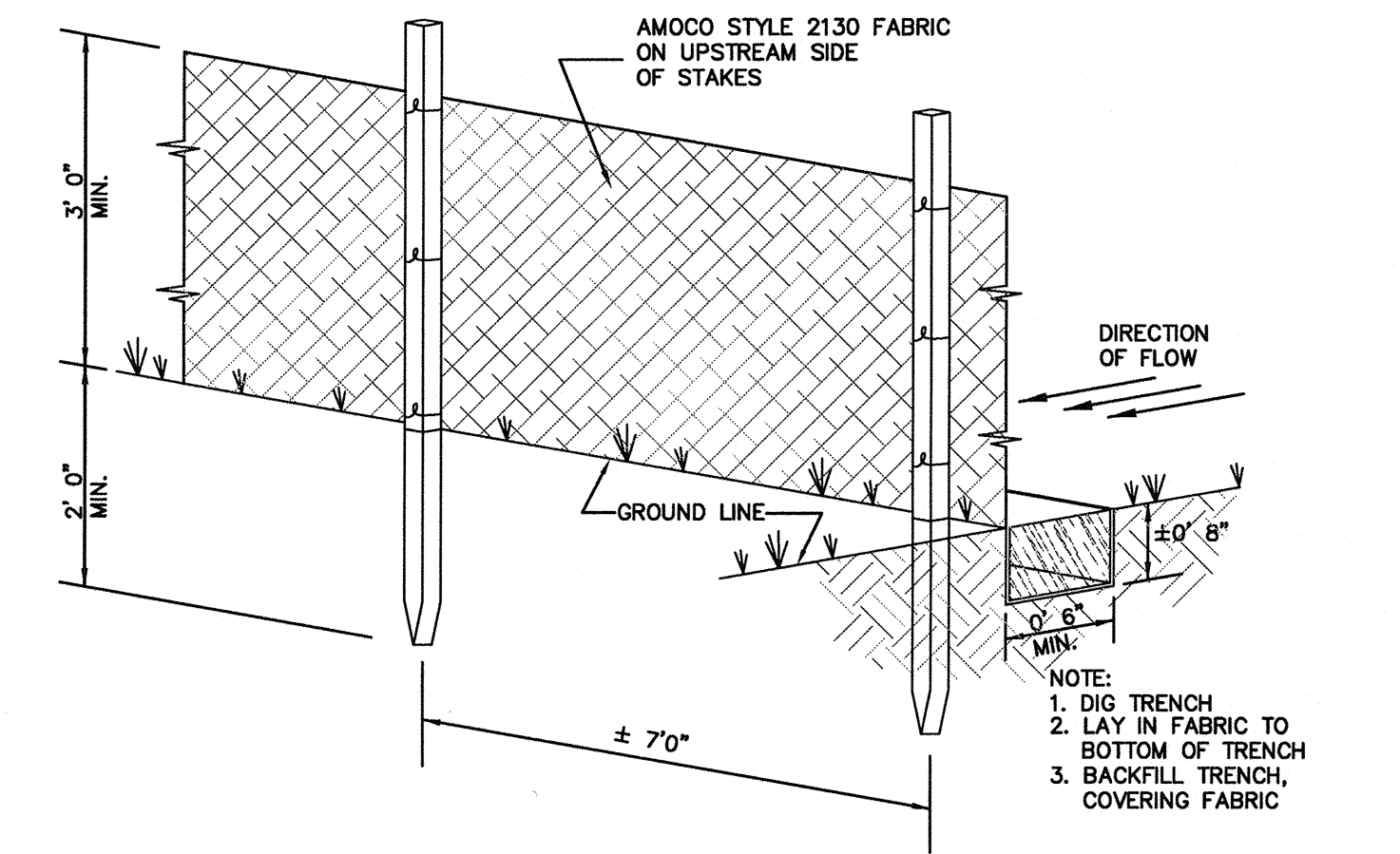
REVISION		
ITEM NO.	DESCRIPTION OF CHANGE	APPROVAL DATE



**BIG CREEK STABILIZATION AT
WARD ROAD BRIDGE**
OWNER: SHELBY COUNTY PUBLIC WORKS
ENGINEER: A2H INC.

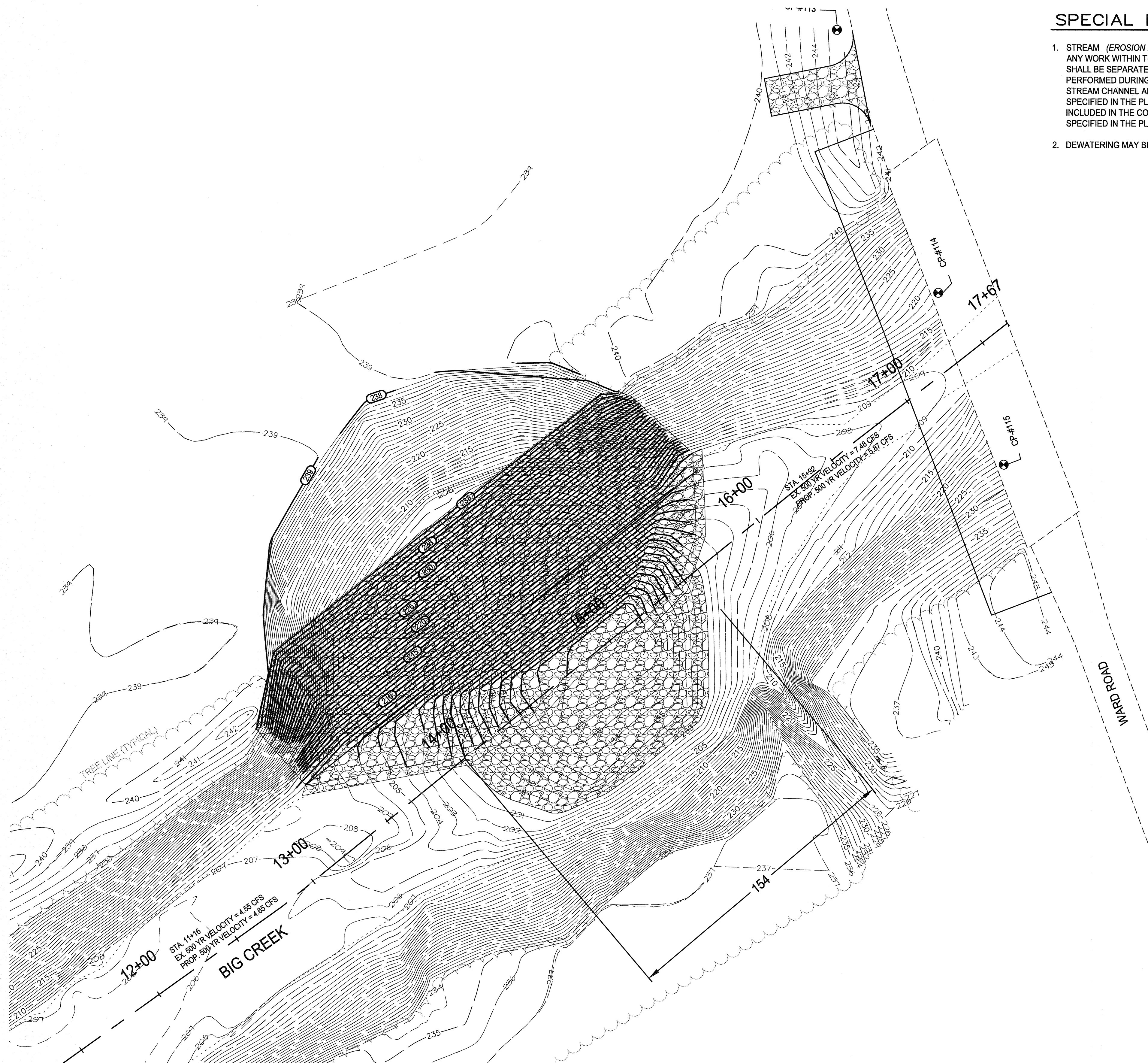
DRAINAGE BASIN:/SEWER BASIN: **BS-1**
SHEET 1 OF 2
DIVISION OF PUBLIC WORKS
EPSC PLAN PHASE I
LOCATION: 6995 AND 7005 WARD ROAD
SHELBY COUNTY, TENNESSEE
SURVEY: THY INC. DATE: 01/13 BOOK:
DRAWN BY: A2H INC. DATE: 02/13 SCALE: 1"= 30'
DESIGN BY: A2H INC. DATE: 02/13 PROJECT:
APPROVED:
PUBLIC WORKS DIRECTOR, SHELBY COUNTY
DATE:

1. STREAM (EROSION PREVENTION AND SEDIMENT CONTROL NOTE): ANY WORK WITHIN THE STREAM CHANNEL AREA (E.G., RIP-RAP PLACEMENT, ETC.) SHALL BE SEPARATED FROM FLOWING WATER OR EXPECTED FLOW PATH AND PERFORMED DURING LOW FLOW CONDITIONS. ALL ITEMS USED WITHIN THE STREAM CHANNEL AREA FOR DIVERSION OF FLOW (OR EXPECTED FLOW), UNLESS SPECIFIED IN THE PLANS, SHALL NOT BE PAID FOR DIRECTLY BUT SHALL BE INCLUDED IN THE COST OF THE OTHER ITEMS. THE NOTE EXCLUDES ANY ITEMS SPECIFIED IN THE PLANS FOR USE WITH EC-STR-31 AND EC-STR-32.
2. DEWATERING MAY BE NECESSARY.

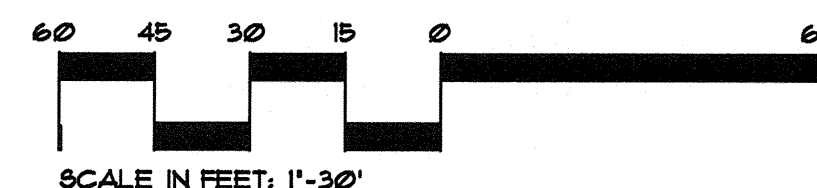
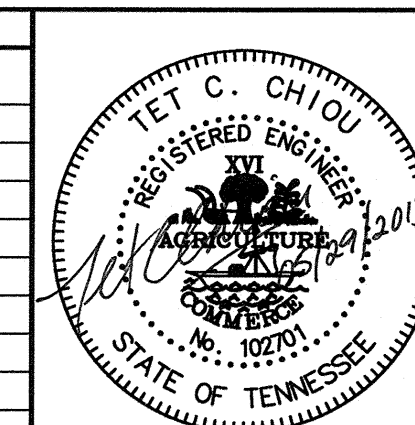


1 SILT FENCE DETAIL
NOT TO SCALE

NOT TO SCALE
EXACT LOCATION AS DIRECTED BY ENGINEER



NORT

[illegible]

**BIG CREEK STABILIZATION AT
WARD ROAD BRIDGE**

OWNER: SHELBY COUNTY PUBLIC WORKS
ENGINEER: A2H INC.

DRAINAGE BASIN:/SEWER BASIN: BS-1

SHEET 2 OF 2

DIVISION OF PUBLIC WORKS

EPSC PLAN PHASE II

LOCATION: 6995 AND 7005 WARD ROAD

SHELBY COUNTY, TENNESSEE

SURVEY: THY INC. DATE: 02/13 BOOK: _____

SURVEY: THY INC. DATE: 02/13 BOOK: _____
DRAWN BY: A2H INC. DATE: 02/13 SCALE: 1" = 20'

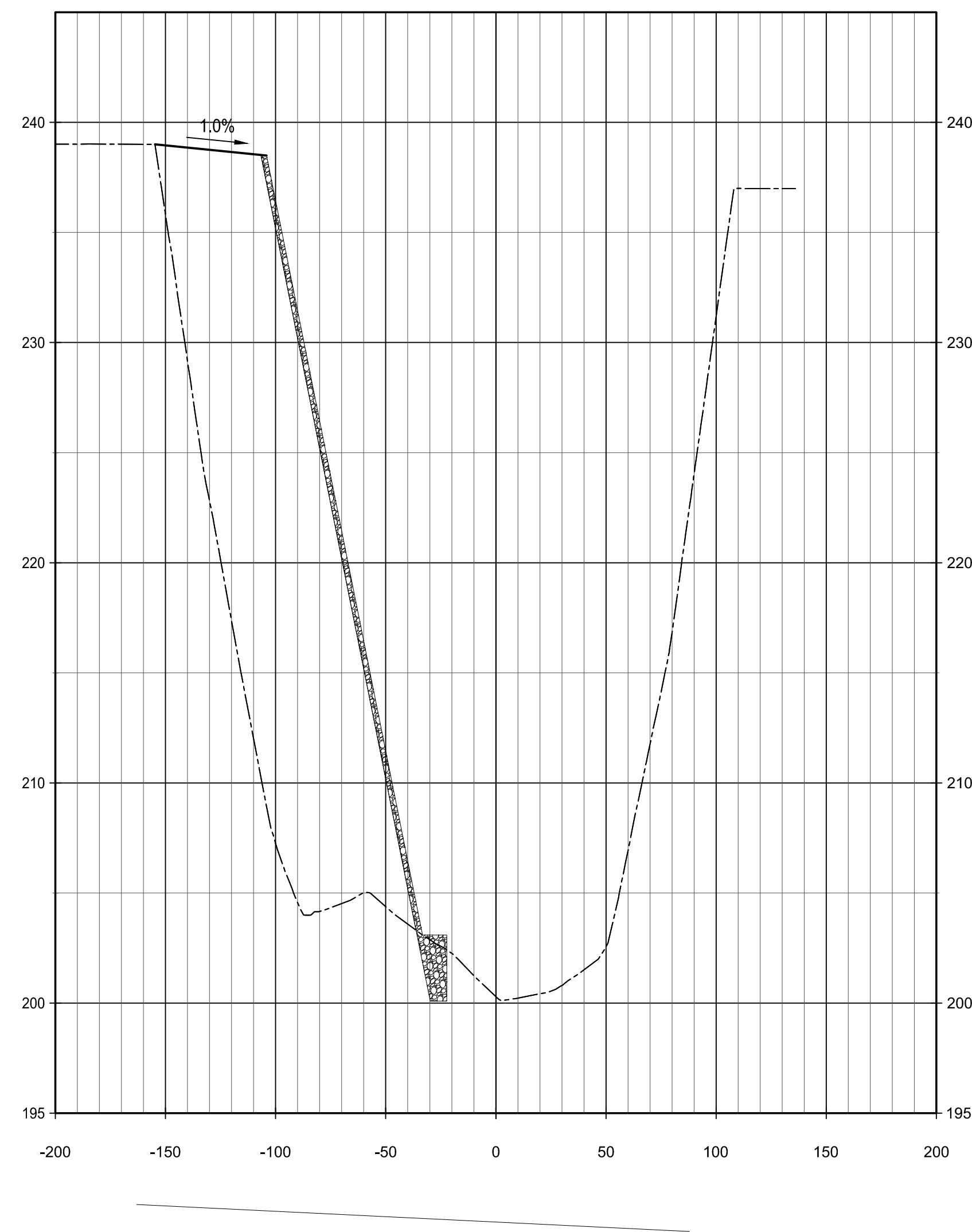
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DESIGN BY: A2H INC. DATE: 02/13 PROJECT: _____

DATE: 02/13
APPROVED:

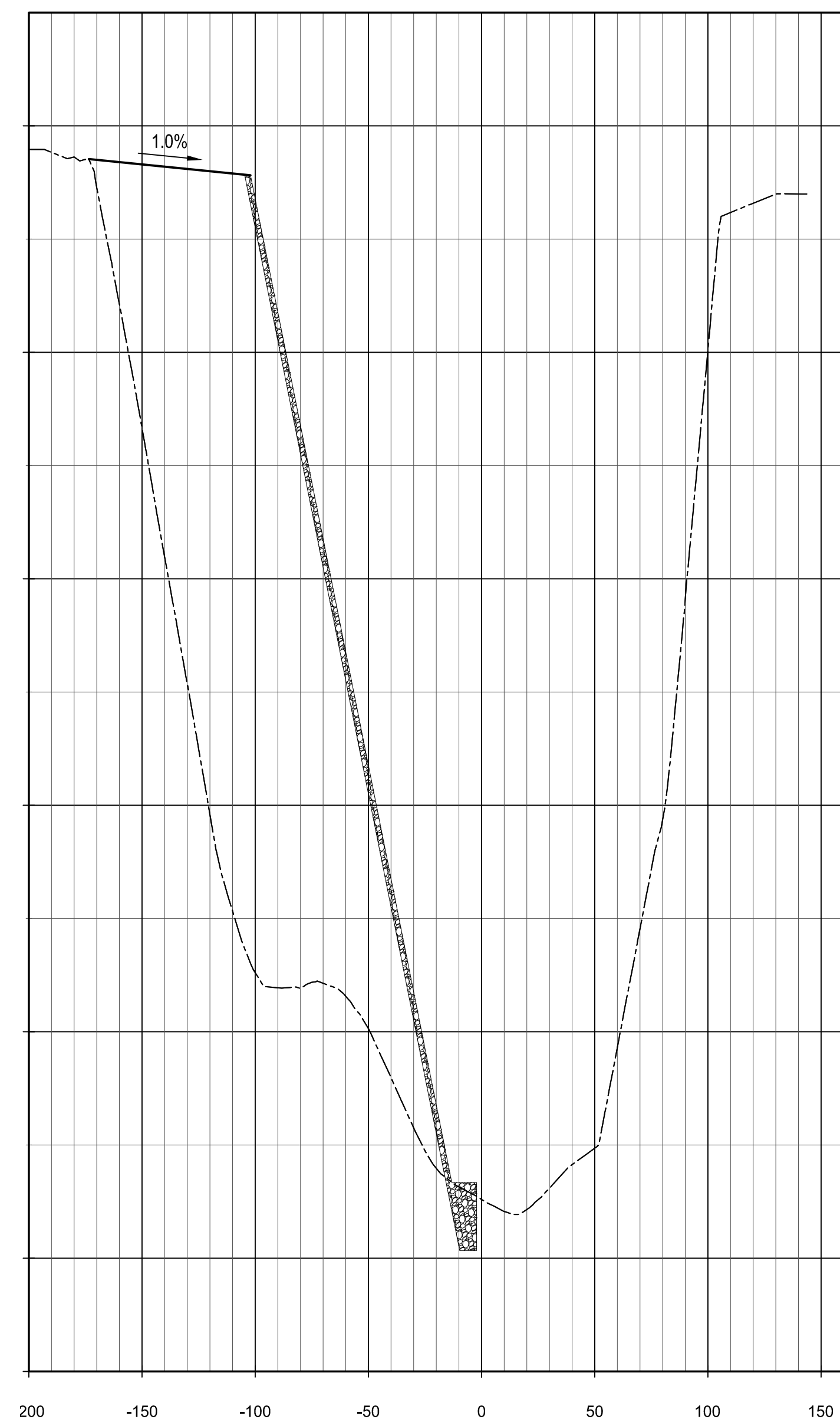
PUBLIC WORKS DIRECTOR, SHELBY COUNTY

DATE _____

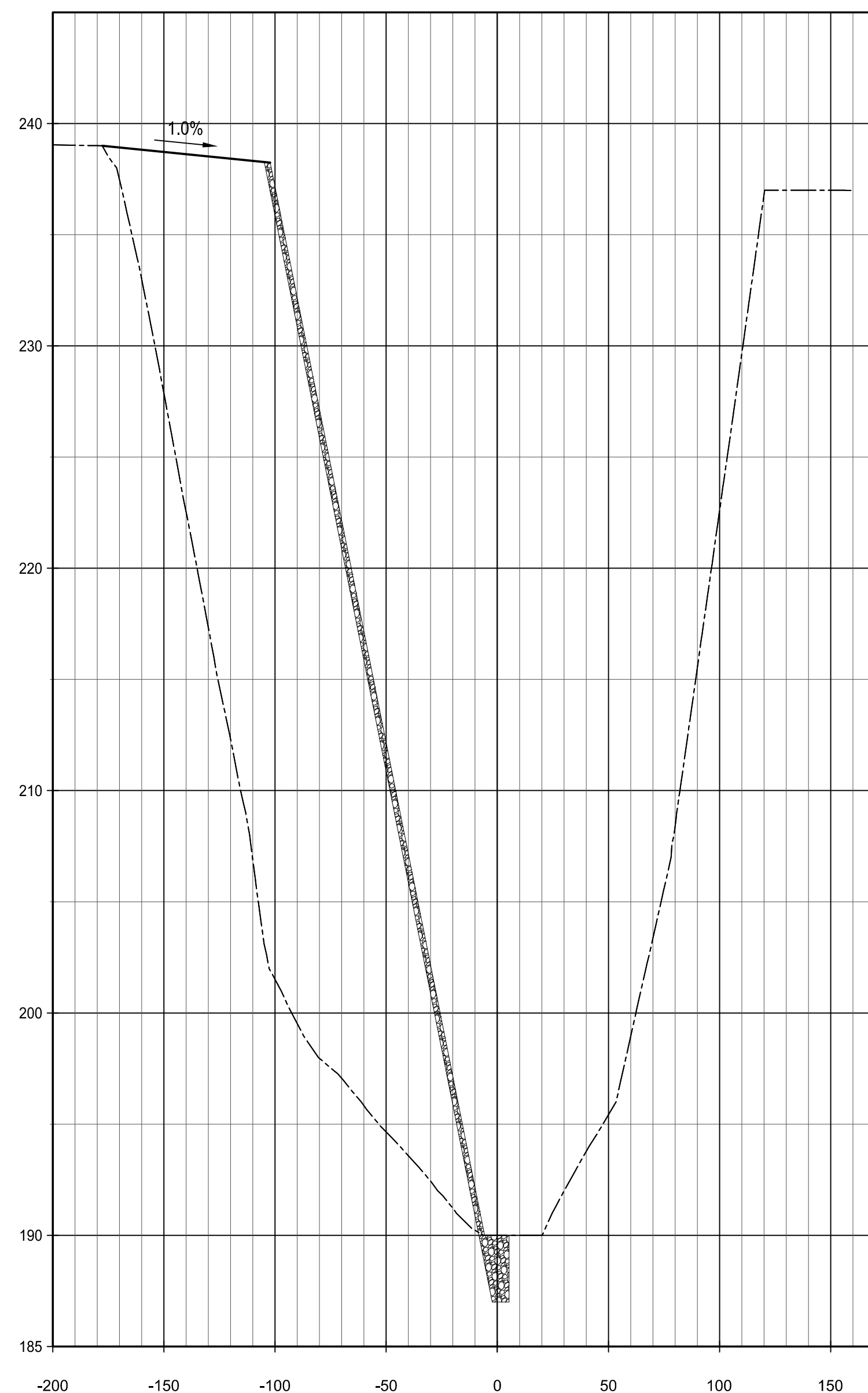
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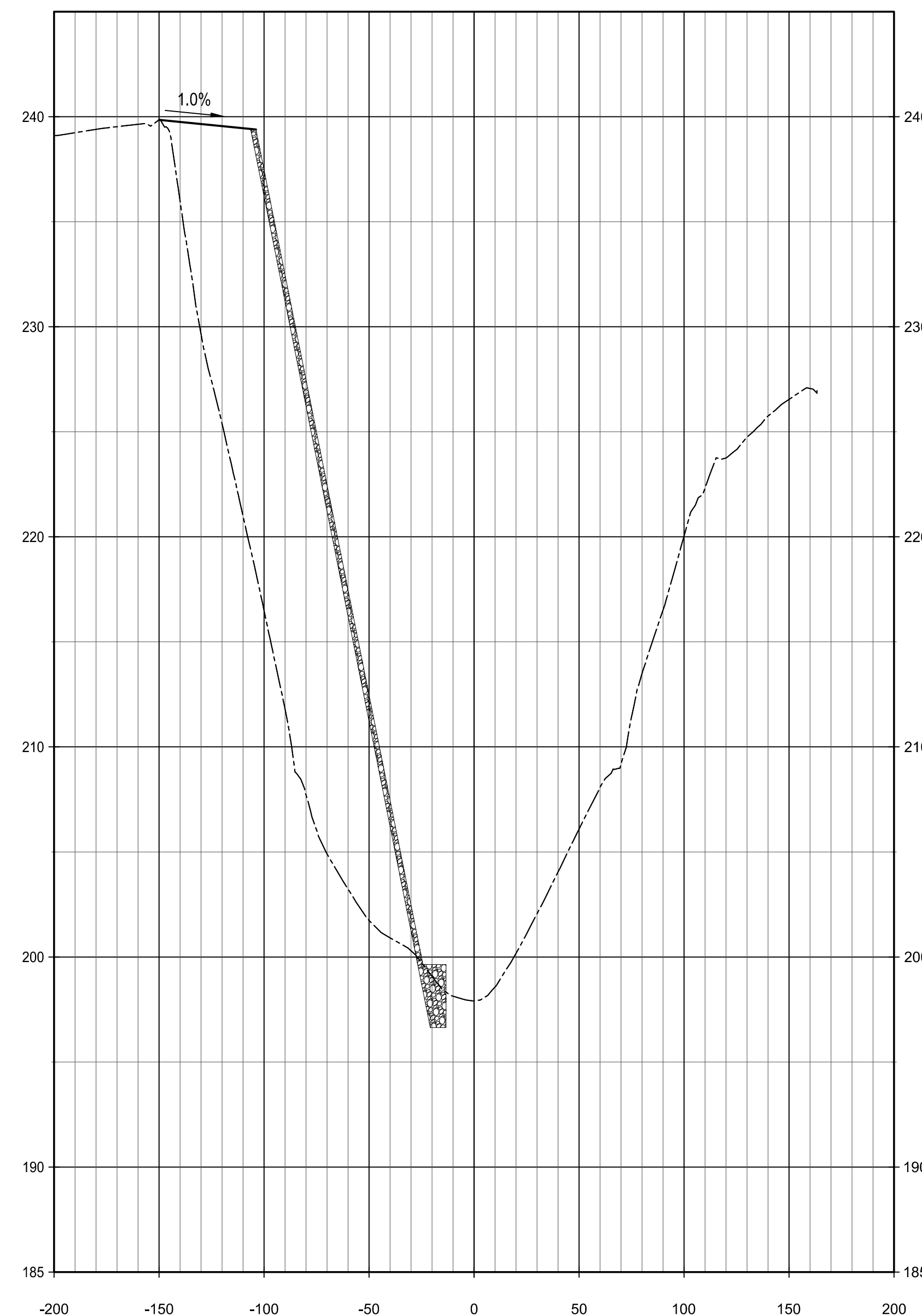
14+50.00



15+00.00



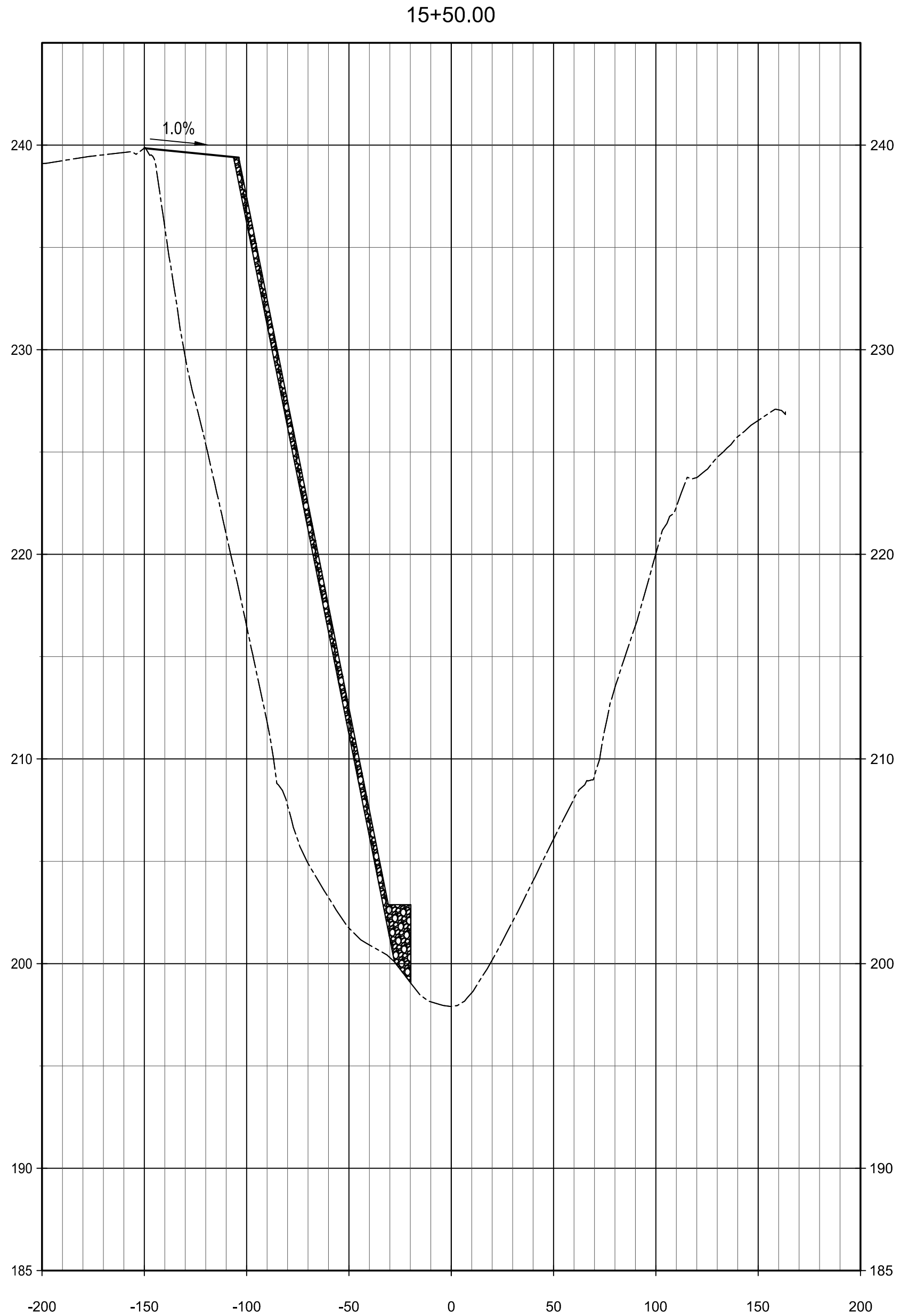
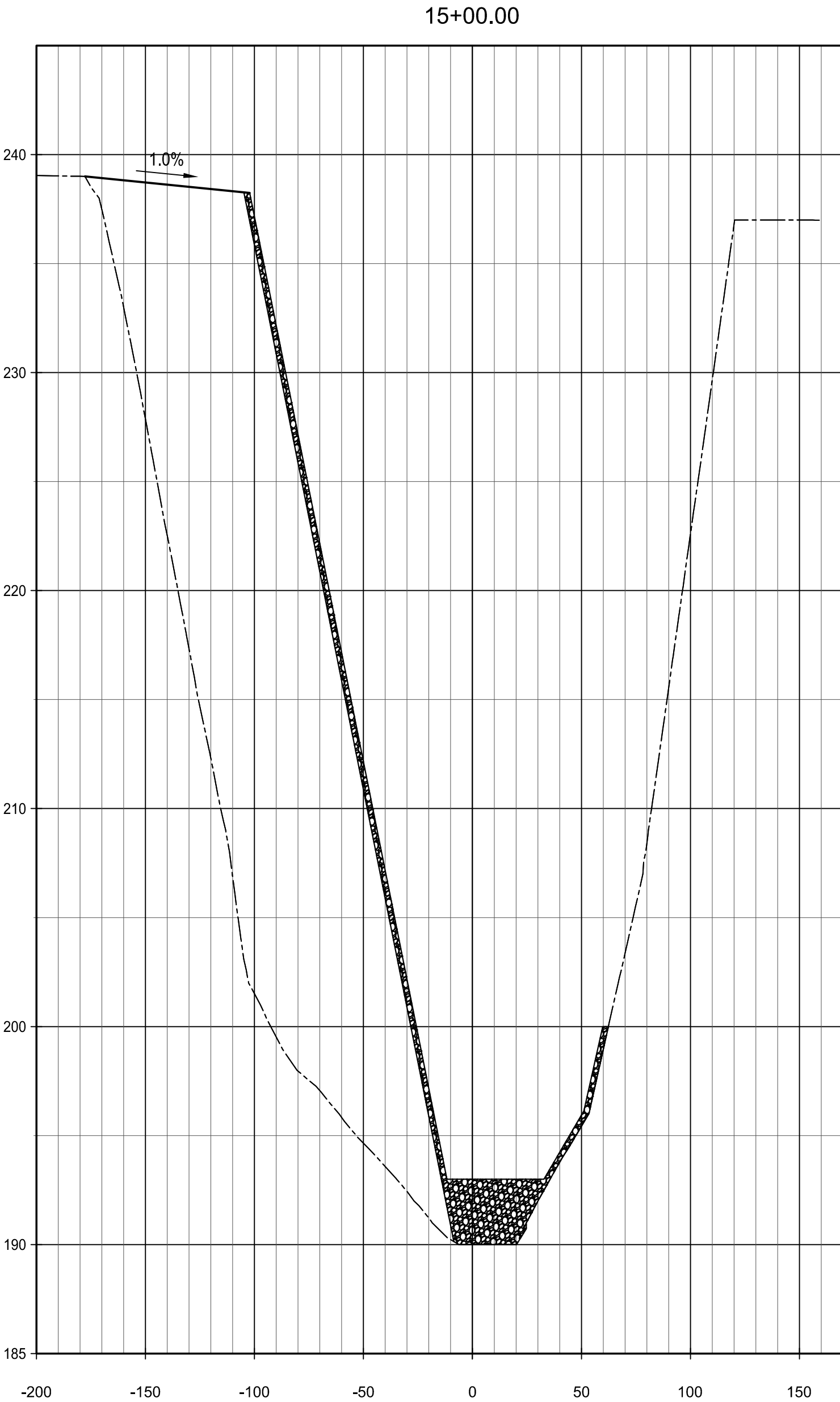
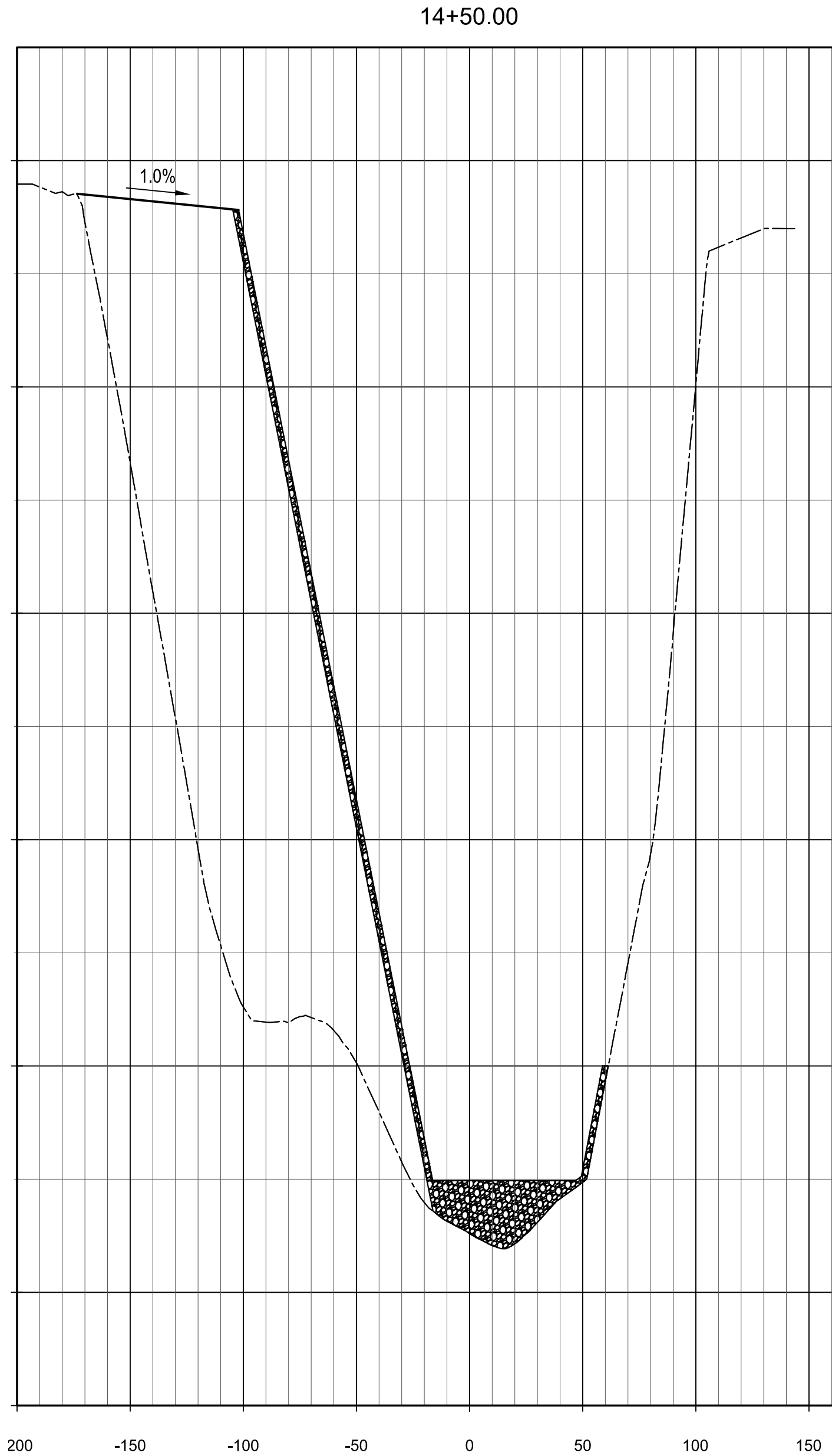
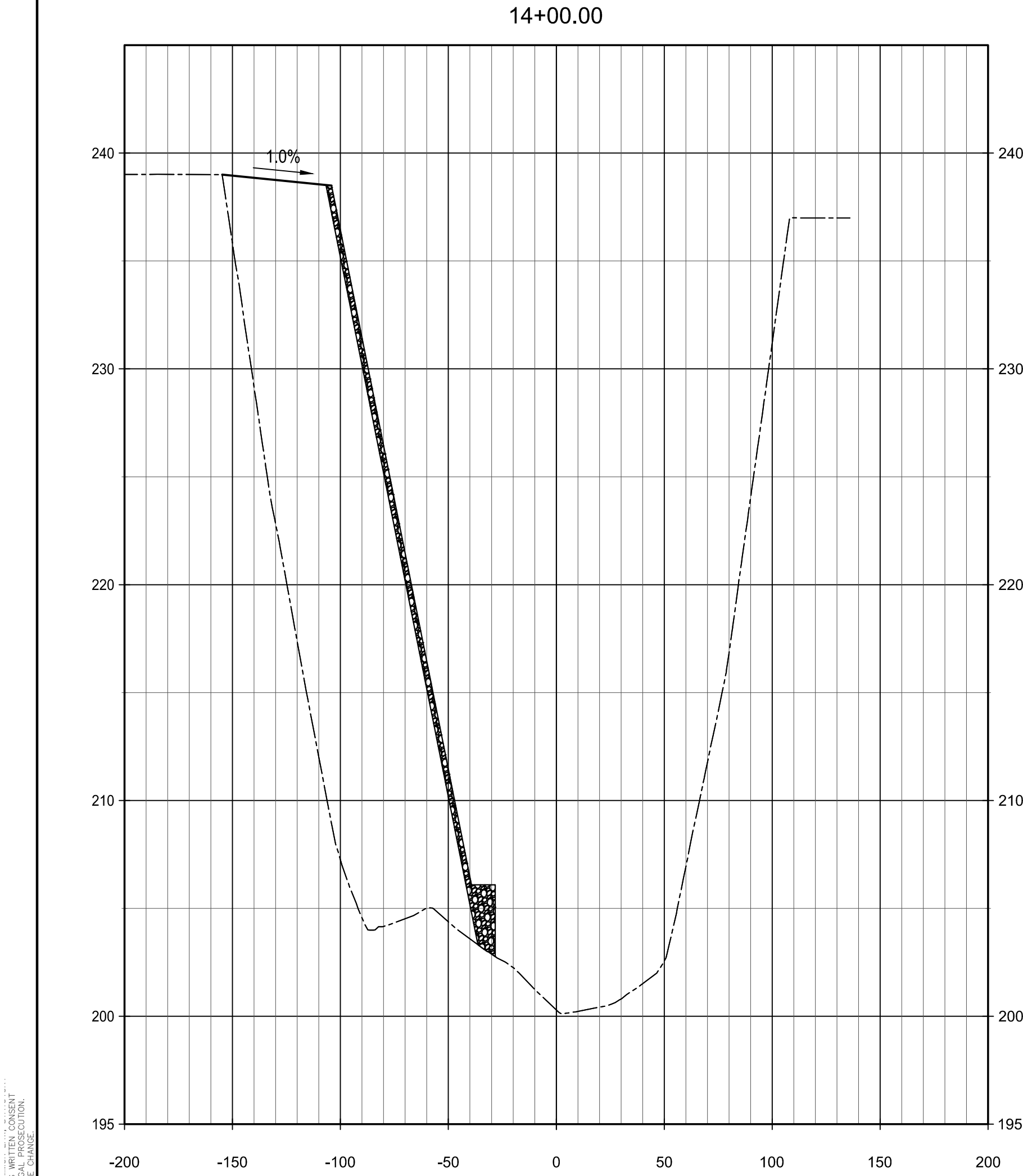
15+50.00



BIG CREEK STABILIZATION AT
WARD ROAD BRIDGE
CROSS SECTION: BASE BID

ALL RIGHTS RESERVED. NO PART OF THIS DOCUMENT MAY BE REPRODUCED OR TRANSMITED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, WITHOUT PERMISSION IN WRITING FROM THE ENGINEER. ANY CHANGES MADE TO THIS DOCUMENT WITHOUT THE ENGINEER'S WRITTEN CONSENT WILL BE AT THE USER'S SOLE RISK. THE USER ASSUMES ALL LIABILITY FOR ANY CLAIMS OR DAMAGES, INCLUDING REASONABLE ATTORNEY'S FEES, ARISING OUT OF OR IN CONNECTION WITH THE USE OF THIS DOCUMENT. THE USER RELEASES THE ENGINEER FROM ALL LIABILITY FOR ANY CLAIMS OR DAMAGES, INCLUDING REASONABLE ATTORNEY'S FEES, ARISING OUT OF OR IN CONNECTION WITH THE USE OF THIS DOCUMENT.

PROJECT: ...
JOB NUMBER: ...12334
PLOT DATE: ...2/8/13
PLOT SCALE: ...1=1



BIG CREEK STABILIZATION AT
WARD ROAD BRIDGE
CROSS SECTION: ALTERNATE 1 & 2